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FINANCIAL STRUCTURES: INDEBTEDNESS AND CREDIT¹

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INTRODUCTION

Our subject is debt, credit and the rate of interest in Keynesian theory and the significance of these variables for economic policy. A particular interest is the significance of the financial structure - i.e., the impact of the particular set of financial institutions

1. Money, Credit and Prices in Keynesian Perspective
Proceedings of a Conference held at the University of Paris I-
Panthéon-Sorbonne
Edited by Alain Barrère, Professor of Economics University of
Paris I-Panthéon-Sorbonne
St. Martin's Press New York
Editor's Note

This collection of essays and two companion volumes, The Foundations of Keynesian Analysis and Keynesian Economic Policies, were presented at a conference held to the centenary of the birth of John Maynard Keynes at the University of Paris on 12-15 September 1983.

The University of Paris I-Panthéon-Sorbonne and the CNRS - Centre National de la Recherche Scientifique - organized the conference and made this volume possible.

A.B.

and financial relations that exist upon the behavior of the economy. Modern capitalism is a system in which financial relations are of particular importance in determining what happens. An understanding of the movements in calendar time of contemporary capitalism depends upon understanding the behavior and evolution of financial practices and structures.

Keynesian theory is premised upon the proposition that it is not logically permissible to explain the behavior of our type of economy by first examining an abstract 'no money' economy and then introduce 'money', for if the money that is introduced has the banking characteristics that money has in our economy then the introduction of money requires abandoning some of the axioms that underlie the 'no money' theory. It follows that Keynesian theory holds that precise propositions about the behavior of the economy are conditional upon institutions and usages, particularly the monetary institutions and usages but also those that determine wages and prices. The theory holds that system behavior in its detailed (relative prices, particular outputs) and its aggregated (employment, national product, price level) dimensions depends upon the financial structure: there is no division between what orthodox theorists call 'the real' and 'the nominal'.

It is now commonplace to read analyses that emanate from banking houses and establishment sources of

the structure of debt and of the overindebtedness that afflicts households, business, banks, and financial institutions within countries as well as the burdens imposed by international debts. However, while strong on presentation of data details and insightful as to how our economy in fact operates, these analyses are weak in

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Whether Brazil was in default in mid-July 1983 is a technical nicety. It didn't and it couldn't fulfil maturing commitments to the Bank of International Settlements, and the Bank did not call upon the guarantors of Brazil's loans to fulfil their obligations under that guarantee. During 1981 and 1982 few will doubt that the vast majority of the savings banks in the United States were not only making losses but had negative net worth on the basis of any fair market value assets. In mid-July 1983, a multibillion dollar financial organization - Baldwin United - quite clearly had liabilities in excess of its assets. In each contemporary case, formal fault, bankruptcy and moratoria were avoided and the debts were restructured: often with the participation of Treasuries and Central Banks.³

Even as we 'commemorate' the hundredth year of Keynes' birth we must be aware that February and March of 1983 marked the fiftieth anniversary of the well-nigh

complete breakdown of the financial system in the United States in 1933. It will be argued in what follows that the traumatic events of 1929-33 were significant in the development of the Keynes' thought. In 1931, over a year before the collapse of the United States banking system, Keynes wrote: 'I believe that, if today a really conservative valuation were made of all doubtful assets, quite an significant proportion of the banks of the world would be found to be insolvent'.⁴ Today many economists could say the same thing about the banks of the world. Nevertheless the expectation - quite rightly I believe - is that no catastrophe of the order of 1932-3 is in the offing.

As we peruse the Wall Street and other writings about the 'overindebtedness' or the 'fragility' that now characterizes the financial structure, it is clear that there is no theoretical vision which enlightens these analysts' views. Their confidence that a great catastrophic collapse will not take place is not based upon any "theoretical constructs" that enable them to argue that the financial institutions and the financial structure of the capitalist economies are now such that the great depression/great collapse is less likely to happen now than in the early 1930s.

It is my view that the economic theory of Keynes, expanded to include details about the institutional

arrangements in finance, yields a theoretical vision and a set of constructs which explains how financial fragility develops and why, nevertheless, a great collapse - while no impossible - is not likely to happen in the reasonable future. the economic theory of Keynes is not IS-LM - nor is it the theory that the overt foes of Keynes ascribe to him. It does happen to be the theory that Keynes put forth as his in two remarkable expository and explanatory articles: his contribution to Fisher's Festschrift and his rebuttal to Viner.⁵

There are 'two sets' of Keynes' minor writings which are of particular importance in understanding Keynes' revolution in economic theory and policy and the role of money and financial relations in Keynesian theory. One set of writings took place in 1931 and reflected observations and discussions that took place on the occasion of Keynes' visit to America to participate in the Harris Foundation lecture of 1931.⁶ In this set of Writings Keynes' strong reactions to the banking crisis of 1931 that was especially marked in the Mid-West is evident. The second set of writings took place in late 1936 (the articles were published in 1937) and were summary statements of the theory of the General Theory. My interpretation of these articles is that in their light the General Theory should have been titled General

Theory of Employment, Asset Prices and Money. Keynes' theory refers back to the observations dealing with asset prices, price levels and bank and business solvency of 1931; the liquidity preference theory of interest is really a theory of the determination of asset prices in a capitalist economy. Money is not neutral because money affects absolute and relative asset prices and the pace of investment, whereas wages and profits (which are determined by investment) yield absolute and relative output prices.

THE 'CHICAGO' PAPERS

Keynes journeyed to America in mid-1931; the objective was to 'give lectures at the University of Chicago sponsored by the Harris Foundation'. His subject was 'An Economic Analysis of Unemployment'.⁷ He left for London on 11 July; his visit lasted about six weeks.

While he was in America, a series of Bank runs occurred in the middle west, in and around Chicago. In writing to Hubert Henderson on 22 June 1931, Keynes noted:

The effect on the situation here which I most underestimated before I came was the position of many banks in the country...

A very great proportion of the member banks...are probably not solvent today...

Owing to the number of banks that have actually failed there is great unrest among depositors...

This means that the banks in turn are extraordinarily nervous...since they never know when they have to support a run from their depositors. Accordingly they have an absolute mania for liquidity...

It is the weakness of the banking system all over the country which primarily stands in the way of the usual remedy, cheap and abundant credit, failing to take effect.⁸

On his way back to England, Keynes wrote a memorandum on 'Economic Conditions in the United States' which he circulated to the Economic Advisory Council and others. In this memo he again emphasized the instability and fragility of the banking system and the impact of the well-nigh insatiable desire for liquidity of business, banks and households - a desire that Keynes found wholly rational in the light of losses these entities had recently experienced.⁹ In August 1931, soon after his

return from America he wrote 'The Consequences to the banks of the Collapse of Money Values', in which phrases and arguments from the letter to Henderson and the memorandum to the Economic Advisory Council appear. The subject of this famous piece was the 'serious embarrassment of the banks'¹⁰ and the cause a 'topheavy position' that related to the burden of indebtedness. In a famous, often-cited passage Keynes wrote:

Let us begin at the beginning of the argument. There is a multitude of real asserts in the world which constitute our capital wealth - buildings, stocks of commodities, goods in course of these assets, however, have not infrequently borrowed money in order to become possessed of them. To a corresponding extent the actual owners of wealth have claims, not on real assets, but on money. A considerable part of this 'financing' takes place through the banking system, which interposes its guarantee between its depositors who lend it money, and its borrowing customers to whom it loans money wherewith to finance the purchase of real assets. the interposition of this veil of money between the real asset and the wealth owner is a specially marked characteristic of the modern world. Partly as a result of the increasing confidence felt in recent years in the leading banking systems, the practice has grown to

formidable dimensions. In addition to this there is the great mass of bonded and mortgage indebtedness held by individuals.¹¹

Keynes then examines what has happened to the value of various classes of property that constitute the assets of those who have borrowed from banks. He continues:

Finally, there are the loans and advances which banks have made to their customers for the purposes of their customers' business. These are, in many cases, in the worst condition of all. The security in these cases is primarily the profit, actual and prospective, of the business which is being financed; and in present circumstances for many classes of producers of raw materials, of farmers and of manufacturers, there are no profits and every prospect of insolvencies, if matters do not soon take a turn for the better.

To sum up, there is scarcely any class of property, except real estate, however useful and important to the welfare of the community, the current money value of which has not suffered an enormous and scarcely preceded decline. This has happened in a community which is so organized that a veil of money is, as I have said, interposed over a wide field between the actual asset and the wealth owner. The ostensible

proprietor of the actual asset has financed it by borrowing money from the actual owner of wealth. Furthermore, it is largely through the banking system that all this has been arranged. That is to say, the banks have, for a consideration, interposed their guarantee. They stand between the real borrower and the real lender. They have given their guarantee to the real lender; and this guarantee is only good if the money value of the asset belonging to the real borrower is worth the money which has been advanced on it.

It is for this reason that a decline in money values so severe as that which we are now experiencing threatens the solidarity of the whole financial structure. Banks and bankers are by nature blind. They have not seen what was coming...In the United States some if them employ so-called 'economists' who tell us even today that our troubles are due to the fact that the prices of some commodities and some services have not yet fallen enough, regardless of what should be a menace to the solvency of their institution.¹²

Keynes' prescient conclusion August 1931 was that:

Over a great part of the world, and not least in the United States, the position of the banks, though partly concealed from the public eye, may be in fact the weakest element in the whole situation. It is obvious that the

present trend of events cannot go much further without something breaking. If nothing is done, it will be amongst the world's banks that the really critical breakages will occur.¹³

Eighteen months later, in February 1933, the collapse of the banking system occurred.

Keynes' American visit led to the development of a vision of banking and finance in which the financing intermediation role was central, and in which asset values and profit flows to business determined the viability of banking and the flow of financing. The references to the financing 'veil of money' is of course an echo of the classical barter paradigms' view of money as a veil. Any serious follow-up of the arguments of these passages from August 1931 must lead to an inquiry about the determinants of relative nominal values of assets. As one digs as a theorist into the themes born out of the observations of 1931, the relations among profits flows, insatiable desires for liquidity and capitalization rates in determining asset values and the relation between asset values and investment become subjects for analysis. From the Treatise Keynes already has profits determined by investment; that point was a major theme in his Harris Foundation lecture.

In the year after his return from Chicago Keynes, in his interactions with the 'Circus' and in his lectures, moved from a defence of the Treatise to the development of a monetary theory of production (vol. XIII, pp. 380-1).¹⁴ By late 1932 he prepared the programmatic contribution to a Festschrift for Prof. A. Spiethoff; his title was 'A Monetary Theory of Production', in which he states that 'The theory, which I desiderate would deal...with an economy in which money plays a part of its own and affects in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behavior of money between the first state and the last'.¹⁵ He went on to comment: 'I am saying that booms and depressions are phenomena peculiar to an economy in which...money is not neutral'.¹⁶

It may be an irony of history but Keynes' radical revolution in economic theory had 'Chicago roots', not especially from his hosts at the University, but rather from the financial turbulence that Carl Sandberg's 'City of the Big Shoulders' was experiencing. Insul, Yerkes and the trials and tribulations of Chicago banks provided inputs to Keynes' theory.

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SUCCINCT STATEMENTS OF THE GENERAL THEORY

Keynes wrote two remarkable expository papers that are succinct expositions of the General Theory: these were his contribution 'The Theory of the Rate of Interest' to the Fisher Festschrift and a rebuttal to a series of reviews in the Quarterly Journal of Economics; this was titled The General Theory of Employment. I have called this the rebuttal to Viner (Chicago again!). In these papers, it is clear that the vision of the effect of money and finance that came out of the American experience of collapsing asset values and mass insolvency of financial institutions that Keynes observed at close range in 1931, underlies the economic theory of the General Theory.

In his Fisher Festschrift contribution, Keynes summarized his and the orthodox theory in six propositions, four of which he held to be common to both theories and two in which he held that his theories diverged from the orthodox.

The common propositions were:

(1) Interest on money means precisely what the books arithmetic say that it means; that is to say, it is

simply the premium obtainable on current cash over deferred cash, so that it measures the marginal preference (for the community as a whole) for holding cash in hand over cash for deferred delivery. No one would pay this premium unless the possession of cash conveniently say that interest on money measures the marginal efficiency of money measured in terms of itself as a unit.

(2) Money is not peculiar in having a marginal efficiency measured in terms of itself. Surplus stocks of commodities in excess of requirements and other capital assets representing surplus capacity may, indeed, have a negative marginal efficiency in terms of themselves, but normally capital assets of all kinds have a positive marginal efficiency measured in terms of themselves.

(3) The effort to obtain the best advantage from the possession of wealth will set up a tendency for capital assets to exchange, in equilibrium, at values proportionate to their marginal efficiencies in terms of a common unit.

(4) If the demand price of our capital asset A thus determined is not less than its replacement cost, new investment in A will take place, the scale of such

investment depending on the capacity available for the production of A, i.e. on its elasticity of supply, and on the rate at which y , its marginal efficiency, declines as the amount of investment in A increases. At a scale of new investment at which the marginal cost of producing A is equal to its demand price as above, we have a position of equilibrium. Thus the price system resulting from the relationships between the marginal efficiencies of different capital assets including money, measured in terms of a common unit, determines the aggregate rate of investment.¹⁷

The orthodox theory, in Keynes' view, also requires:

(5) The marginal efficiency of money in terms of itself has the peculiarity that it is independent of its quantity. In this respect it differs from other capital assets. This is a consequence of the quantity theory of money strictly stated.¹⁸

(6) The scale of investment will not reach its equilibrium level until the point is reached at which the

elasticity of supply of output as a whole has fallen to zero.¹⁹

These six propositions lead to (a) full employment and (b) independence of 'real' from monetary phenomena. In particular, proposition (5) asserts that changes in the quantity of money will not affect the relative prices of investment goods and other outputs are independent of the quantity of money. However, if the marginal efficiency of money in terms of itself is independent of the quantity of money then the determination of this marginal efficiency is open. Thus the determination of the price system of capital assets is not explained in orthodox theory except by assuming that the prices of capital assets always equals their depreciated original costs.

A 'contradiction' or 'logical hole' in orthodox theory is its failure to explain investment, for within the orthodox series of propositions there is no explanation of why 'the demand price of our capital asset A' is equal to or greater 'than its replacement'.

Keynes held that within the orthodox theory the 'marginal efficiency of various assets are independent of money'. The relative prices of assets move one with the other until a common value of the marginal efficiency is found, at which point the rate of interest on money falls

into line. But for the marginal efficiencies of assets to achieve a common ratio the system must have a unique level of output, of employment. Thus the sixth proposition - or the full employment level of output - is presupposed in orthodox theory.

Keynes replaced proposition (5) and (6) with

(5)* The marginal efficiency of money in terms of itself is, in general, a function of its quantity (though not of its quantity alone), just as in the case of other capital assets.

(6)* Aggregate investment may reach its equilibrium rate under proposition (4) above, before the elasticity of supply of output as a whole has fallen to zero.²⁰

Proposition (5)* is crucial and the combination of Propositions (5)* and (3) lead to the critical difference between orthodox and Keynesian theory: orthodox theory is based upon the postulate and introduces an essential nominal core to its analysis and explanation of how a capitalist economy operates. Proposition (5)* fulfills the research program set out in the contribution to the Spiethof Festschrift.

The common proposition (2) is worth noting and commenting on. As Keynes showed in the General Theory,

own marginal efficiencies can be transformed into money marginal efficiencies. But money marginal efficiencies of capital assets are profit flows. In the Treatise, Keynes had aggregate profit flows as a function of investment in excess of savings; after the General Theory and the assimilation of Kalecki's way of stating the aggregate demand equations we know that as a first approximation profits depend upon investment. The positive marginal efficiency of capital assets in terms of themselves reflect the 'productivity of capital asset services' to today's production function-constrained neoclassical economists. To Keynes, the marginal efficiency of capital in terms of itself reflects the scarcity of capital as determined by the size and composition of aggregate demand. A common phrasing can (and here does) cover up an enormous difference in the analytical framework.

In what I labelled the rebuttal to Viner, Keynes briefly comments on the other contributions to the Quarterly Journal of Economics round-up. In his comments on Leontief's view that Keynes' Theory was homogeneous of degree zero in money wages, in the sense that a fall in money wages would not raise employment, Keynes wrote:

I would also suggest that his [Leontief's] idea might be applied more fruitfully and with greater theoretical precision in connection with the part played

by the quantity of money in determining the rate of interest. For it is here, I think, that the homogeneity postulate primarily enters into the orthodox theoretical scheme.²¹

i.e., the classical theory is, and Keynes' theory is not, homogeneous of degree zero in the money supply.

F.H. Hahn is a general equilibrium theorist who describes himself as sympathetic to the Keynesian vision. Nevertheless he writes:

The objective of agents that determine their action and plans do not depend on any nominal magnitudes. Agents care only about 'real' things, such as goods (properly dated and distinguished by state of nature), leisure and effort. We know this as the axiom of the absence of money illusion, which it seems impossible to abandon in any sensible analysis.²²

But if you accept that sensible analysis cannot abandon the axiom of reals, you are asserting that Keynes' analysis is not sensible. The entire axiomatic basis of Keynes' theory rests on abandoning the neutrality of money. Thus Keynes stated:

The orthodox theory maintains that the forces which determine the common value of the marginal efficiency of various assets are independent of money, which has, so to speak, no autonomous influence, and that prices move until the marginal efficiency of money, i.e., the rate of interest, falls into line with the common value of the marginal efficiency of other assets as determined by other forces. My theory, on the other hand, maintains that this is a special case and that over a wide range possible cases almost the opposite is true, namely, that the marginal efficiency of money is determined by forces partly appropriate to itself, and that prices move until the marginal efficiency of other assets falls into line with the rate of interest.²³

The prices that move are the relative as well as the nominal prices of assets, capital and financial, and these prices are determined on principles that are quite different than those that determine current output prices.

Thus the financial structure - that sits between those who control and operate the capital assets of the economy to produce and to make profits and those who own the wealth of the economy, no matter how peculiarly wealth is distributed - affects the performance of the economy in an essential way. The relation between both

business and financial institutions and financial institutions among themselves and with households can be measured by the cash flow implications of the relation as stated in contracts and the 'aim' or 'purpose' of the contracts. Both 'depositors' and 'borrowers' of banks and other financial organizations enter upon money today-money tomorrow contracts: the depositors give up money today in exchange for promised money, as needed or at a definite tomorrow, whereas the borrowers acquire money now for promises to pay money later.

The money now for money later contract between banks (generally speaking all financial institutions) and business is entered upon so that business can acquire assets or spend. The spending that is traditionally financed is investment spending. The typical investment process involves credit and financial markets at two phases - one the 'construction' phase, the second the 'take out' phase. The construction phase is often called 'temporary' and the investment phase is often called 'permanent' financing. All financing contracts involve the eventual payment of more money to the financing organization than the amount paid out. The money to meet these commitments will arise either from refinancing, such as take out financing, or from the flow of gross profits (defined as gross capital income not as the residual after accounting manipulations and fulfillment of financing contracts that are typically called

profits). However take out financing will be available only as the expected profits over the life of the take out financing contract exceeds the face value of the contract by a goodly sum.

Thus the financial structure rests upon the current long-run expectations of the profitability of operations. But the contract is nominal, and therefore the expected profitability is nominal as long as the basic contract is in money terms. With due apologies to O. Steiger and G. Heinsohn,²⁴ the economic problem we have to deal with is not genesis but evolution. It matters little that money had its origin in banking - which I believe they effectively demonstrate - for the problem at hand is to examine the behavior of an economy with fully sophisticated banking, which implies that there is outstanding a larger sum of commitments to pay money to banks than the amount of money in existence. In our economy, a system is in place by which the payment of commitments to banks destroys money, even as the activation of bank credits create money.

In a world with a fully-developed banking and financial system in place the holding of money in some relation to the volume of payment commitments outstanding - a relation that in turn reflects the felt uncertainty of expected profit flows and the felt uncertainty that alternative take out financing will be available - yields

utility to the holder of money. Money holdings are not sterile in a world of uncertainty and outstanding financial contracts, where uncertainty applies to a particular extend to the ability to realize profit expectations and to fulfil financing and refinancing plans. This is the utility '1' of holding money that is so important in Keynes' exposition of the determinants of the price systems of assets. It is worthwhile at this stage once again quote Keynes' proposition (5)*.

The marginal efficiency of money in terms of itself is, in general, a function of its quantity (though not of its quantity alone), just as in the case of other capital assets.

I would amend the proposition to read 'capital and financial assets', which the context makes clear was Keynes' meaning.

THE THEORY OF ASSET VALUES, MONEY AND FINANCIAL STRUCTURES²⁵

Money is not neutral because money is the liability of banks, banks hold assets denominated in money, and these assets will be validated by cash flows from business (in the pure, theoretically simple, case) or

from business, households and governments (in the more complex and realistic 'real world' case). These cash flows that validate bank assets in the pure case are the gross profits (correctly defined) of business and these validating gross profits are a part of nominal prices. Furthermore the nominal gross profits equals, again in the simple pure case, nominal gross investment and nominal gross investment is a function of (but not only of) extensions of bank credit. The 'axiom of reals' is thus not valid for an economy in which gross investment (which includes the maintenance of inventories) takes place and in which there is continuing external financing of investment.

In a world with bank money and banks that finance asset holding and investment activity, the behavior of money had differential impacts on price system for current output (which includes wages) and the price system for current output and the price system for assets are not independent, one from the other. The prices of current output carry gross profits and the aggregate of profits imputed to collections of capital assets in firms and plants is one (but not the sole) variable that determines capital asset prices. The other variable that affect capital asset prices are capitalization rates. Asset prices in turn determine the demand prices for the production of capital assets (i.e., the demand price for investment output) and these prices along with supply

conditions that reflect labour, financing and material costs determine investment. Investment and the 'multiplier' yield total demand and the course of money wages depends upon the excess or the deficiency of the demand for labour. In this way, money wages and money prices of current output - which rise and fall with the supply/demand conditions in labour markets - are brought into conformity with capital asset prices but in no sense does this process guarantee that there is a fixed factor of proportionality between output and asset prices. This is so because the validating cash flows are liability structures depend upon the composition of demand.

The subjective valuation of capital assets to its holder is the sum of the subjective valuations of the prospective income, q , the carrying costs, c , and the liquidity, ' l ' that is embodied in the asset; as ' q ' and ' c ' are money flows and ' l ' is a evaluation of the worth of insurance against contingencies, the common measuring rod has to be a subjective utility. Income and carrying costs are readily defined; income in particular is the gross capital income (gross profits plus interest expenses; a serious question is whether 'extravagant' overhead and business style spending should not also be included in gross capital income). In a modern economy, the gross capital income takes the form of a money flow; profits are the M' in Marx's $M-C-M'$.

Liquidity 'l', is the property of an asset which enables it to be 'negotiated' for money either through sale, or hypothecation; for financial assets liquidity has the additional dimension of time to maturity. In any discussion of the value of liquidity, the ability of an asset - either directly or through encasement - to purchase output or other assets and to fulfil contract terms is important. If outstanding contracts in an economy call for the delivery - or payment - of corn or cigarettes then the actual possession of corn or cigarettes makes one liquid. It is the 'fact' that there is a complex network of financial contracts denominated in dollars and that 'banks' hold claims that call for the delivery of more money to banks than the amount outstanding, that gives the actual possessing of money the character of holding an insurance policy.

Organization in the economy - but especially businesses that borrow and bankers (of various kinds) that lend and borrow - have cash payment commitments that are dated, demand or contingent. The cash to fulfil these payment commitments can be obtained as income or profit flows, by selling or hypothecating assets, or by using cash on hand. If we step back to when the contracts that led to the payments due today were negotiated, the model belief of borrowers and lenders was that the profit flows due to using capital assets or the income from financial assets in portfolio would enable

the payment commitments to be fulfilled. Any shortfall from validating this belief, such as when asset hypothecation, sale or cash are used to meet payment commitments, affects the current willingness to believe such scenarios about the future and makes the holding of cash or readily encashable assets in portfolios more valuable.

If all assets yield $q - c + 1$ but money, as Keynes put it in the famous remark about lunatic asylum, yields only 1, then a fall in the value of possessing 1, - and because, by its nature, 1 dollar = 1 dollar at all times - raises the price in dollars of assets that yield mainly $q - c$ and little in the way of 1, even as a rise in the value of 1 lowers the price of assets that embody little 1 but mainly yield $q - c$.

There is thus a price system of capital assets P_{K1} , and a price system of financial assets, P_{F1} , in which relative prices depend upon the importance of payments or profit flows (interest flows) and liquidity in determining asset values. The 'marginal efficiencies' of capital and financial assets adjust to the 'marginal efficiency' holding money by having their prices in money change. When capital asset prices rise relative to the supply price of investment output then the profit potential from producing such capital assets increase. Such a rise in the price of capital assets can occur if the expected profits increase, the assurance with which

the expectations of profits increases (which decreases the value of liquidity with a constant amount of the liquidity-only asset, money, in existence) or the value of liquidity decreases because the quantity of money increases.

Given a quantity of money M_1 and a historical background that gives liquidity the subjective valuation that leads to curve 1 we have a price P_{k1} (Figure 3.1 illustrates this relation).

The price system P_{k1} becomes the demand prices for the various outputs that are investment goods. Inherited wage rates and the existing pattern of financing charges yields a supply price of investment output. We will, as a first approximation, assume that the supply and demand prices are perfectly elastic until full employment is

achieved, at which point the supply curve becomes perfectly inelastic. This is the model the Keynes imputes to the orthodox economists of the time. Variations in M may raise or lower P_k but this will not have any serious effect, especially if wages and supply prices adjust so that the aggregate of profits reaches some norm (Figure 3.2).

However money - or finance - enters into the investment process in another way. Liquidity has value because there are payment commitments; money itself is a product of banking practices. The creation and destruction of money and debt is part of the process by which resources are created and control over assets determined. We start with a complex banking structure with debts of businesses, governments and households (with liability structures that translate into payment commitments). We don't endeavor to explain how or where this structure of financial interrelation and the interactions among units in an economy with a complex financial structure is our concern.

For the set of existing and continuing firms there is an expected retained earnings (gross) that can be used to acquire capital assets. This 'expected' internal funds yields us a P_{rI} = expected retained earnings (Figure 3.2).

Let us 'heroically' assume that there is an aggregate 'cost curve' for the economy that depends upon the current money wage for its 'marginal' properties and that has as its fixed costs the payment (aggregate) commitments because of the liability structure; and this payment commitment in turn can be divided into the return principal and interest due. Figure 3.3 is a nice conventional partial equilibrium diagram of elementary price theory. Total aggregate demand is P_1Q_1 and the total wage bill is WQ_1 . The gross profits are $(P_1 - AVC)Q_1$. thus the investment that can be financed internally is $P_1I = (P_1 - ATC)Q_1 = C$. This can be integrated with Figure 3.2 so yielding Figure 3.4.

If full employment is to reign then \times of investment must be financed externally. This \times is not only the financing of existing firms but the financing of new firms. \times can be raised by any combination of liabilities on the 'menu' of liabilities that the institutional structure and usages allow. \times is in part financed by bank loans, just as part of the payment of interest and principal goes to banks and 'destroys' bank money.

In this world, borrowing and lending take place on the basis of 'margins of safety'. The 'margins of safety' were characterized by Keynes as borrowers' risk and lenders' risk; lenders' risk is a 'subjective' valuation which, as the dependency on external funds varies, affects the maximum price that units are willing to pay for capital assets.

It is evident from the set up in Figure 3.3 that an increase in interest rates or a decrease in the time to maturity of external financing will raise the average total cost curves, raise the portion of the 'predetermined' gross profits that has to go to fulfil the financial commitments, and therefore

decrease the internal funds available for investment financing. Increase or shortfalls of gross profits will similarly affect the internal/external financing mix.

There is no necessity that the external financing as determined by lenders' and borrowers' risk must lead to the level of investment that implies full employment. The intersection could well be to the left of the 'full employment' investment (as illustrated in Figure 3.4). Any shortfall of external investment financing reduces gross profits and this the availability of internal funds.

P_k reflects the evaluation of expected profits and liquidity. A rise in the ratio of external to internal financing with a fixed flow of internal finance will raise aggregate profits, even as it presumably increases the value of liquidity - thereby having an ambiguous effect upon the price level of capital assets. Innovations in the financial structure - new instruments and new institutions - will tend to decrease the value of liquidity and lower some sets of financing costs from where they otherwise would have been. Decreasing value of

liquidity not only raises P_k relative to P_r but also decreases the rate at which the lenders risk rises from P_r and borrowers risk falls away from P_k . So as new forms of financial intermediation work their way through the economy it tends to raise the ratio of investment to internal financing.

The evolution of the financial structure towards greater complexity in calendar time lead to increasing the price of capital assets relative to current output and the ratio investment to current output. The cumulative effect of the increased complexity of the financial structure is to increase the ratio of payment commitments on account of liabilities to profits and to increase the sensitivity of the entire capital asset valuation process and the payment commitments on debt to variations in the subjective value of liquidity. In particular, in convoluted and highly-levered system a rise in the subjective value of liquidity will lower P_k , raise interest rates on various financial instruments and increase lenders' and borrowers' risk. This in turn lowers the flow of internal funds. In a world where investment activity today is a lagged relation to prior investment decisions this combination results in a rise in external finance beyond the 'plans' of borrowers and lenders. This further raises the value of liquidity and can lead to a breakdown in investment decisions, so that with a lag investment falls precipitously.

A collapse such as Keynes observed taking place in Chicago is a distinct possibility when the financial system affects not only into financing of investment but also the determination of the price level of capital assets.

This is also a problem today, however the impact of government deficits on profits and the interventions by Central Banks to refinance threatened institutions has to date prevented the cumulative process that leads to deep depressions from being realized in the era of 'fragile finance' that seemingly began in the late 1960s.

CONCLUSION

The central distinction between orthodox and Keynesian theory is that 'the axiom of reals' (or, equivalently, 'the neutrality of money') is accepted in orthodox and rejected in Keynesian theory. Although arguments such as Patinkin's seems to make 'the neutrality of money' a theorem, the theorem is nothing more than a rephrasing of the preference systems and production functions over real economic variables that are almost casually accepted by the orthodox theory.

The negation of the axiom of the reals involves a deep shift in the core subject matter of economics. It is a presumption of orthodox theory that the matter of economics. It is a presumption of orthodox theory that

the primary problem of economics is to explain how markets allocate given resources. However the non-neutrality of money follows from beginning the theoretical argument with money as bank liabilities, even as the bank assets are liabilities of units that either own capital assets or are investing. The economic theory in which money is not neutral takes resource creation as the basic problem that economic theory must address. Therefore the controversy over 'Mr. Keynes and The Classics' was based on a fundamental misconception to the effect that Keynes and the Classics were attacking the same 'problem', when in fact they were not.

To a very large extent, policy has been made for advanced capitalist economies - which are in many ways engines for resource creation - by treating these economies as if the efficient utilization of given resources was the only economic problem. The flaw in the capitalist mode of creating resources is that it leads to a complex layered financial structure, which can finance effective demand by expanding even as it requires continuing validation by a flow of profits from output production to the financial structure.

Thus at any moment in time there is a need for profit, wage or tax flows to validate debt even as there is a need for new financing for investment, for it is investment that generates profits.

However to a unit - an agent - asset appreciation leads to profits, and the banking and financial system will finance asset holdings because of expected appreciation. Once such a demand for financing exists then organizations will finance positions even though they lose on the carry because the expectations is that capital value appreciation will compensate for the negative 'cash flows'.

In a system with a large and complex debt structure, the possibility exists that a rise in interest rates increases the demand for finance. Thus market reactions to high and rising demand for financing leads to rising interest rates, and rising interest rates lead to an increase in the demand for financing. Thus banks, industrial companies and even national states find themselves capitalizing interest, and the higher market interest rates the faster the rate of increase in their debt. This was true of the savings banks in the United States in 1982 and was (and continues to be) true in 1983 of the various countries with large international debts.

If we had lived in a world of laissez-faire and small government, the financial problems of 1974, 1979-80 and 1982-3 could very well have led to a cumulative interactive breakdown such as took place between 1929 and 1933. there is no guarantee that we are not living out our lives in a process like that of 1929-33, but instead

of having the breakdown take place in less than four years the breakdown is stretching out over many more.

The reason why we contained the 1974-5 and the 1982-3 crises are: (1) the very active lender of last resort interventions by Central Banks, especially the Federal Reserve System; and (2) the deficits - both of the national government and on trade account - that the United States ran. Internal dollar-denominated deficits that are at least in part contracyclical stabilize profits. The deficit on trade account of the United States makes dollars available (directly or indirectly) to dollar-denominated debtors, such as Brazil and Mexico, and these available dollars make it possible for their debts to be validated.

The high US government deficit is necessary because only the excess of the government deficit over the deficit in the balance of trade is available to sustain dollar profits. Domestic political irritation at the government and the trade deficit may very well lead to counter-productive policies by the United States. The difficulty of achieving full employment in an economy that must run a massive trade deficit must be appreciated by policy makers and the government if there is to be some change of policy being successful.

As was mentioned earlier the hundredth anniversary of Keynes' birth is also the fiftieth anniversary of the 'breakdown' of the world's financial structure in 1933.

There is no doubt that Keynes' as a theorist and as a man of the corridors of power was influential in creating the structure of institutions that served the world quite well over much of the post-war period. But Keynes was also a man of 'the City' and the conventional Keynesian economics, as well as the orthodox economists of today, pay scant attention to the influence of finance, financing and the need to validate bankers' commitments and commitments to bankers in determining system behavior.

On the whole, the big government and interventionist Central Bank capitalism that has ruled since the Second World War has been more successful than the small government-constrained Central Bank capitalism that ruled prior to 1939. This was mainly so because the counter-cyclical deficits of big government capitalism sustained profits, even as the Central Bank refinanced liability structures and sustained 'insolvent' organizations. Most of the success of the post-war period was accidental; the analytical foundations for policy either in the 'Keynesian' econometric models or the 'monetarist forms ignore liability structures and the need for debt validation.

However profits sustained by government deficits and reliquidification in response to crises lead to inflation. The frustration of declining rates of progress, enormous deficits on trade account (with

resultant employment problems) and inflation may very well lead to fiscal and Central Bank policies that stand aside when a crisis such as that of 1982-3 emerges in the future. If 1920s' fiscal orthodoxy and Central Bank abstaining from intervention ever becomes the policy of the US government and the Federal Reserve, then a crisis like that of mid-1982 can lead to a close approximation of the tragedy of the 1930s. If that happens, the lessons that Keynes learned on his Chicago visit will have to be learned anew.

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